

# **Securitization of Assets: An Accounting and Finance Case**

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## **Abstract**

This educational case explores the interesting and complex topic of asset securitization. In the past decade, a large portion of worldwide debt issuances have used this process. Securitization is the transformation of long-term receivables into new debt securities that look entirely different. These securities are sold into the investment markets and traded with liquidity. In this case, students help guide a company to securitize its loans receivable for the first time. Both finance and accounting issues are explored. An actual securitization of equipment loans is used as a reference towards completion of the assignment.

## **Introduction**

ProAgri Company, a (fictitious) public manufacturer of farm and construction machinery, is planning to securitize its loans receivable for the first time. With a market capitalization of \$7 billion, ProAgri is a smaller U.S. competitor of Deere and Company (\$30 billion), and Caterpillar, Inc. (\$55 billion). ProAgri has observed that both of its larger rivals have been securitizing receivables for years. In contrast, ProAgri has occasionally engaged in secured borrowings using its receivables as collateral. Currently, ProAgri has \$139 million of loans receivable. The company has a credit rating of BBB (or Baa), which is at the low end of "investment grade", the top tier of credit ratings. While ProAgri has the ability to simply add additional long-term debt based on this credit rating, the idea of securitizing receivables is now favored by top management.

Securitization has similarities to a sale of receivables and to a secured borrowing. However, the cash flows coming in from the receivables are rearranged to create debt securities, which can be freely traded in the financial markets. A key feature of the securitization process is that a high volume of highly rated (usually AAA rated) securities is created. These securities are highly demanded by investors and synthesis of these securities often leads to lower overall company borrowing costs when compared to borrowing alone or to a secured borrowing. In order to securitize these assets, a special purpose entity (SPE) is usually created to hold the receivables. This allows the receivables to be treated as bankruptcy remote from the company. In the event of bankruptcy, the company's creditors would have no claim on the receivables. The SPE is commonly structured as a trust.

Figure 1 shows a comparison of a sale of receivables, a secured borrowing using receivables as collateral, and a securitization that can be treated as a sale or secured borrowing. Accounting for transfers of assets is primarily governed by Topic 860 of the Accounting Standards Codification (ASC) of the Financial Accounting Standards Board (FASB) (FASB 2012). There are three conditions which must be met for a securitization to qualify for sale treatment. The transferred assets must be isolated from the transferor. The transferee must be free to pledge or

exchange the assets. And the transferor cannot maintain effective control over the transferred assets. Those securitizations that do not qualify as sales are treated as secured borrowings. Furthermore, a securitization SPE is usually a variable interest entity (VIE) for accounting purposes, and often must be consolidated by the company that created it. ASC Topic 810 provides the guidance in this area.

### **Part 1: Securitization Planning and Decision-Making**

ProAgri's CEO, Paul Cornett, and CFO, Jason Wheatley, are discussing the proposed securitization.

Cornett (CEO): Hi Jason. I'm excited about our decision to securitize. I've read the background information you provided about the securitization process. I feel mostly up to speed, but wanted to meet to discuss some of the finer points. Let me try to explain the basics back to you to make sure I've got them.

Each period, cash flows come into the securitization trust or SPE (Figure 2) from the receivables. The cash flows are first used to pay the AAA rated securities. These AAA securities are fairly similar to any other highly rated debt securities. After the AAA securities are paid, there will normally be additional cash remaining. Servicing is paid second. The servicer is the financial institution that is interacting with borrowers, collecting payments, and managing delinquencies. The servicer gets a small amount of the cash flows as compensation. We could elect to be the loan servicer, as we are now, or we could outsource the servicing to another company. Finally, to the extent that there is still cash remaining, the residual interest is paid. The residual interest is a much lower quality (higher risk) instrument than the AAA securities. It is not a rated security with an actual face value and coupon rate. It earns the "left over" cash flows, and if cash flows are lower than expected, the residual interest might earn nothing. So from a broad point of view, the residual interest protects the AAA securities and allows them to earn their AAA rating.

Wheatley (CFO): So far, that is a good summary. Regarding the protection you mentioned, over-collateralization is a type of credit enhancement for the AAA securities. Specifically, the principal amount of receivables coming into the pool is higher than the corresponding principal amount of AAA securities created. The difference is the residual interest. Then, a concept interrelated with overcollateralization is excess spread. The interest rates on the receivables will be higher than the interest rates paid to the AAA securities, leading to an excess of cash inflow. Other forms of potential credit enhancement include third party guarantees of payment on the debt securities.

Cornett (CEO): Can you show me a current breakdown of our loans (notes) receivable?

Wheatley (CFO): Certainly. I have them here (see Figure 3). We have a total of \$139 million of loans receivable. The rows represent different loan qualities as measured by the credit rating of the borrower. For instance, the loans in the first row have borrowers with a weighted average FICO score of 825 (a perfect score being 850). The columns indicate whether the loans are past due, and if so, to what extent. Our allowance for loan losses is currently at 1.3% of the overall loans receivable balance. As you move from the top left of the table to the bottom right, the allowance applied to each cell is larger. Let me also add that the breakdown of individual loans, including their size, interest rate, and maturity date, is not shown here.

By way of contrast, many financial institutions have loss allowances at 3-4% of notes receivable in 2012. Our borrowers have fared better than borrowers in general, because farming really hasn't suffered like the overall economy has. Furthermore, our lending practices never became particularly aggressive. Despite these facts, we still must consider whether some of the receivables should not go into the pool.

Cornett (CEO): Why would some be excluded?

Wheatley (CFO): Investors will want the receivables to be of a certain quality and homogeneity. Certainly, all of the receivables in this securitization were originated in the United States, and they all pertain to agricultural equipment loans. But my next step is to look at a recent (2010) Deere and Company securitization to examine the quality of receivables that they place in their securitization trust.

Deere and Company (“Deere”), or more specifically the John Deere Capital Corporation performs securitizations of receivables each year. Our other competitor, Caterpillar, Inc. also has a finance subsidiary that extends credit to customers, and likewise securitizes receivables. Deere has participated in the asset-backed securities market since 1992. I went to Deere’s Investor Relations page, which can be found here:

[http://www.deere.com/en\\_US/ir/index.html](http://www.deere.com/en_US/ir/index.html)

By following the “Fixed Income Investors” link, I found and downloaded the JDOT (John Deere Owner Trust) 2010 prospectus. Alternatively, it can be found directly at this address:

[http://www.deere.com/en\\_US/docs/Corporate/investor\\_relations/pdf/abs/DOT2010/prospectus\\_2010.pdf](http://www.deere.com/en_US/docs/Corporate/investor_relations/pdf/abs/DOT2010/prospectus_2010.pdf)

Also, I acquired the 2009 (year ended October 31, 2009) Deere and Company form 10-K as an additional source of information. This can be found through the company’s investor relations page, or through the SEC’s EDGAR database:

[http://www.sec.gov/Archives/edgar/data/315189/000110465909070344/a09-32005\\_110k.htm](http://www.sec.gov/Archives/edgar/data/315189/000110465909070344/a09-32005_110k.htm)

**Requirement 1: Analyze the quality of the receivables in the Deere securitization by looking at the JDOT 2010 prospectus. If ProAgri wishes to follow the blueprint of Deere, should they exclude any receivables (Figure 3) from the securitization?**

## **Part 2: Modeling the Securitization**

Later, CFO Wheatley and controller Jim Barley meet to discuss the expected cash flows in the securitization.

Wheatley (CFO): I have prepared some tentative assumptions in order to assess the expected cash flows in the securitization. These assumptions pertain to the annual default rate on the receivables, the prepayment rate of the receivables, and the servicing fee, among other things.

Barley (Controller): Let’s review the assumptions together, and then model this securitization in a spreadsheet. We need to be careful here because there is a lot to consider.

### **Securitization Assumptions:**

#### ***Loans Receivable:***

ProAgri has decided it can only securitize \$126 million of its loans receivable instead of the entire \$139 million (use this \$126 million amount, independent of your answer to requirement 1). The loans, considered as a whole, carry a 9% annual interest rate, and mature in 7 years. The amount of expected principal receipts for a year is: beginning net principal divided by the number of periods remaining. For example, under simple conditions (no defaults or prepayments), \$18 million (\$126 million / 7) of principal would be received each year for seven years. While the actual pattern of receipts may be more complex for the group of receivables, this exercise will simplistically assume even principal receipts each year.

#### **Credit Losses:**

The credit loss or default rate is the annual rate at which uncollectible accounts arise. It is expected that a certain level of defaults will occur; this is a part of establishing the credit rating on the AAA securities. The credit loss rate on the loans is 1.3% per year. The credit loss rate is applied to the beginning loan balance each period, before any other computations. This assumes that credit losses occur on the first day of the year. Therefore, the beginning principal less credit losses will equal “net principal”. This net principal balance is then used to calculate the interest

receipts, principal receipts, and prepayment receipts for the year. Treat all three of these cash flows as though they occur on the last day of the year.

### **Prepayments:**

The prepayment rate is the rate at which principal is repaid ahead of schedule. Most loans allow the borrower to repay part or all of the principal balance before it is due. Early payments will normally increase when interest rates are falling, and decrease when interest rates are rising. The prepayment rate is 11% per year. As stated above, the prepayment rate is applied to the net principal after credit losses. Prepayment is a risk borne by the investor. If interest rates fall and the loans pay off more quickly, the investor still gets the original high rate of return, but for a lesser time period than expected.

### **Servicing:**

As mentioned, a loan servicer is the party that interacts with the borrower. Servicing includes collecting payments on the loans and managing delinquencies. It also involves paying taxes and insurance from escrowed funds and temporarily investing funds. In a securitization, the servicer is paid a percentage fee from the incoming cash flows as compensation. A fee of 0.75% (75 basis points) of the principal balance each year will be paid to the servicer.

### **AAA Rated Debt Securities and Residual Interest:**

AAA rated debt securities will be created from the loans. They have a principal amount of \$118 million, and will pay a 6% annual interest rate. Both of these amounts are lower than the corresponding amounts for the loans. That is, “only” \$118 million of AAA securities are created out of \$126 million of receivables, and the securities will “only” pay 6% as opposed to 9%. As discussed earlier, both of these differences represent the concept of credit enhancement of the AAA securities; the securitization is designed to ensure that default on the highly rated securities is a remote possibility.

The residual interest will have a relative principal amount of \$8 million (resulting from subtracting \$118 million of AAA debt securities from \$126 million of receivables). This \$8 million amount is not a true face value of the residual interest. The residual interest only has the right to the most residual payment at each payment date. Furthermore, the servicing fee has priority over any payments to the residual interest. Because the residual interest is high risk, it will be retained by ProAgri, and not sold to outside investors.

The AAA securities have priority of payments at each payment date and they have the right to all principal payments, including prepayments. In addition, the amount of the credit losses must be “paid” to the AAA instruments as if received. In total, all reductions of principal of the loans receivable (scheduled payments, prepayments, and credit losses) pass through to reduce the principal of the AAA securities by the same numerical amount, all paid in cash.

### **Requirement 2:**

**A) Create a spreadsheet similar to the template provided in Figure 4 using the information given above. The spreadsheet should demonstrate all expected cash flows from the loans (into the trust or SPE) and to investors (out of the trust or SPE). The spreadsheet is separated into three sections: expected cash receipts from loans, expected cash payments to AAA securities, and expected cash payments to the residual interest (servicing should be taken into consideration). Seven rows are used to represent years 1 through 7 so the spreadsheet will be able to keep track of cash flows year by year.**

### **Additional guidance:**

- In the spreadsheet, keep dollar amounts in thousands for simplicity.
- Given the logic provided above, there can be no prepayments in the final year.

**B) Compute the internal rate of return (IRR) of both the AAA securities and the residual interest.**

**C) In contrast to a 1.3% rate, how high would the annual credit loss rate have to be for there to be a shortfall in paying the AAA securities?**

**D) If the prepayment rate is 30% instead of 11%, evaluate and describe how the AAA securities and residual interest would be affected.**

### **Part 3: The Residual Interest**

The CFO and controller then discuss the valuation of the residual interest.

Barley (Controller): We need to think about an appropriate discount rate for the residual interest. It could be an asset on our balance sheet if, after analyzing the facts, we determine that the transfer of receivables to the VIE qualifies as a sale. If so, we would need to compute the fair value of the residual interest. Based on models that our accounting department has been developing, I suggest two possible discount rates for the residual interest: 12% and 14%.

#### **Requirement 3:**

**Why would either discount rate be more appropriate than the other? Before performing computations, which rate will give a higher fair value of the residual interest? Using your spreadsheet, compute the fair value of the residual interest under both discount rate assumptions. Then, create the accounting (sale) entries for the transaction under both assumptions. Figure 5 presents balance sheet information pertaining to the receivables to be securitized. In Figure 5, deferred costs are costs that were directly required to originate the loans and thus were eligible for deferral.**

**In order to make the sale entry, you must consider the following factors. Consider the entire group of loans to be transferred to the SPE, with \$118 million in cash compensation for the AAA securities. The residual interest is retained by the company. The residual interest is treated as a debt security that is recorded at fair value.**

### **Part 4: On- or Off-Balance Sheet**

Barley (controller): Ultimately, we will go with the 12% discount rate for the residual interest. We can support this figure with our models, which rely on historical internal data and economic data. Also, I've thoroughly researched ASC Topic 860, and the transfer of loans to the VIE certainly qualifies as a sale; so we might end up with an accounting gain on the transaction.

Wheatley (CFO): At this point, there are two issues I'd like some guidance on. The first pertains to the statement of cash flows. If we transfer the receivables to a VIE and receive cash, and the transfer qualifies as a sale, is this an operating cash flow or a financing cash flow?

The other issue we need to consider is whether we should remain the servicer of the loans. There are some benefits to doing so, and as such I would lean towards keeping our role as servicer instead of using a third party to service our loans. As the servicer, we will be able to retain decision-making. We can decide whether to restructure certain loans, or whether to foreclose a loan and repossess the related equipment. I know there have been recent accounting changes in this area. Specifically, I know that it's difficult now to have a securitization accounted for as an "off-balance sheet" transaction (Figure 1), correct? We would prefer to have this transaction be off-balance sheet, but more importantly, we want our accounting to conform to GAAP. Does servicing matter?

#### **Requirement 4:**

**A) What are the arguments for cash received from the (AAA debt security) investors being classified as an operating cash flow versus a financing cash flow?**

**B) Research the FASB Codification (Topic 810) and to determine the effect of servicing on accounting outcomes in a securitization. Use Figure 1 as a starting point. You may also use the internet to find helpful summaries provided by larger public accounting firms. Assume that ProAgri will keep the residual interest.**

**C) Refer to the Deere and Company 2009 10-K. Examine the “Notes to Consolidated Financial Statements”. How does Deere account for securitizations (as a sale or a secured borrowing)? Assuming that Deere retains the certificates (residual interest), where are the certificates on the balance sheet?**

### **Part 5: A Final Comparison to Deere**

Wheatley (CFO): As a final step, I think we should review the John Deere Securitization (JDOT 2010 prospectus) even further to learn as much as we can.

#### **Requirement 5:**

**A)** In comparison to ProAgri’s proposed securitization, what is different about the overall structure of the John Deere securitization? What other detailed differences can you find?

**B)** What is the average size of a receivable that is going into this pool? In other words, how much does a typical machinery buying customer owe John Deere? What is the original life of an average receivable, as well as the remaining life? How different are the interest rates between the receivables and the high quality securities?

**C)** Can you come up with a reasonable theory as to why the delinquency rates on the receivables (page S27) are higher than net losses (page S26)?

**D)** On page S40, a purchase option is described. The company is allowed to repurchase some receivables. Do you feel that this violates the definition of a sale of assets? What does the accounting literature (FASB Codification) say? Does the optional redemption (page S36) violate the definition of a sale of assets? What does the accounting literature say?

### **References**

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## TEACHING NOTES

### Case Learning Objectives and Implementation Guidance

Financial accounting courses provide basic coverage of the sale of receivables, and secured borrowing using receivables as collateral. More complex arrangements like securitization are only briefly covered. While securitizations have now become a major tool in U.S. and global financial markets, educational resources for teaching the topic in accounting courses are limited. This article presents a hands-on instructional case which provides a foundation of knowledge on securitizations. The case involves creation of spreadsheets and an analysis of an actual prospectus and annual report. This case allows students to work through a simple securitization and to analyze an actual, more complicated securitization. After successfully completing the case, students will have better comprehension of the borrowing and securitization process. The scenarios in the case also require students to assess the fair value of financial instruments, a skill of growing importance as newer accounting pronouncements are embracing fair value accounting.

A securitization of machinery loans (by Deere and Company) is used as the real-world example in the case. We selected an asset-backed securitization instead of a securitization of mortgages to keep the topic as manageable as possible for students, while still demonstrating the complete process. Deere and Company engages in relatively similar transactions each year.

The case covers the following list of learning objectives:

- increases understanding of securitization and alternatives in financing a corporation
- increases understanding of asset-backed securities
- improves proficiency in using spreadsheets and creating amortization tables
- requires performing internal rate of return computations
- requires use of discount cash flows and computations of fair value
- increases understanding of loan defaults and prepayments
- increases understanding of debt ratings

These additional learning objectives are specific to financial accounting:

- requires preparation of journal entries for complex financial instruments
- increases understanding of differences between sale and secured borrowing of financial instruments
- increases understanding of variable interest entities and associated consolidation issues

This assignment is meant for accounting students. However, the case necessarily involves a close look at the finance driving the transactions. The securitization process must be understood for the accounting implications to have meaning. The case is intended for a graduate financial accounting course, but it can also be used in advanced accounting or the second semester of intermediate accounting. Some prerequisite knowledge is expected from the student. Students are expected to have completed the receivables and long-term liabilities chapters in intermediate accounting. They should be proficient in spreadsheets, and be familiar with amortization schedules, the time value of money, and present value concepts, including internal rate of return. It is recommended that administration of the case take place in two steps. First, the instructor should provide an introductory lecture or discussion (additional introductory material is available upon request). Next, the case should be given to students as a take-home assignment. Given the complexity of the topic, it is suggested that students be organized into groups of three or four.

This case explores a highly intricate topic at considerable depth. The case expands upon the transfers of financial assets (receivables) which most students are introduced to in intermediate accounting. A natural classroom extension of this case (securitization of equipment loans) would be to move into the securitization of residential and commercial mortgages, which would involve more thorough exploration of real estate markets.

## Case Efficacy

The case has been used in graduate financial accounting courses at a large public university. Students consistently find the topic challenging, relevant, and interesting. They are usually surprised to learn of the sheer magnitude of mortgage-backed and asset-backed securitization activity in the economy. Assessment data pertaining to the case is presented in Figure 6. Informal discussions with students support the positive results presented in the table.

## Case Solutions

### **Requirement 1:**

According to the JDOT 2010 prospectus, pages S17-S19, none of Deere's securitized receivables are more than 30 days past due. If ProAgri wants to follow this restriction, then \$6 million of receivables will be excluded, leading to a subtotal of \$133 million for consideration. Next, Deere's receivables have an average FICO Score of 737 (and a range of 475 to 833). If ProAgri desires a similar loan quality, they will have to leave out all loans with a FICO score below 575.

If none of the \$133 million are excluded: the weighted average FICO score would equal 702.

If 425 FICO scores are excluded (\$128 million of remaining receivables): 713

If 425 and 475 are excluded (\$122 million): 725

If 425, 475, and 525 are excluded (\$116 million): 735

### **Requirement 2:**

#### **A) Spreadsheet Solution**

Figure 7 provides a spreadsheet solution. Decimal places are not shown.

An explanation of the first row of each section of the spreadsheet follows:

#### Expected cash inflows from receivables:

Column 3: credit losses = beginning principal (\$126,000) x credit loss percentage (1.3%)

Column 4: net principal = beginning principal (\$126,000) – credit losses (\$1638)

Column 5: interest = net principal (\$124,362) x interest rate (9%)

Column 6: scheduled principal received = net principal (\$124,362) / years remaining (7)

Column 7: prepayments received = net principal (\$124,362) x prepayment rate (11%)

Column 8: ending principal = net principal – scheduled principal received – prepayments received

Column 9: total cash received = interest received + scheduled principal received + prepayments received

#### Senior AAA Securities:

Column 3: principal reduction = scheduled principal received + prepayments received + credit losses. The credit losses are treated as if they were actually received. A simpler way to think about principal reduction is: (beginning principal – ending principal) from the expected cash inflows (above).

Column 4: interest = beginning principal (\$118,000) x interest rate (6%)

Column 5: ending principal = beginning principal (\$118,000) – principal reduction (\$33,084)

Column 6: cash paid to senior AAA securities = principal reduction + interest

#### Residual Interest:

Column 2: total cash received is computed above

Column 3: cash paid to servicer = beginning principal on receivables (\$126,000) x servicing fee (0.75%)

Column 4: cash paid to AAA securities is computed above

Column 5: cash paid to residual interest = total cash inflows – cash to servicing – cash to AAA securities

Internal Rate of Return: cash paid to residual interest column relative to \$8,000 initial investment



**B)** The AAA securities are paid off in the 6<sup>th</sup> year (not the 7<sup>th</sup>), and they earn their expected rate of return of 6%; the residual interest would earn a high IRR of 12.82% despite the given level of credit losses. The residual interest will have low receipts in middle years, and high receipts in the early years and final year.

**C)** For there to be a shortfall in paying the AAA securities, the annual credit loss rate would have to exceed 3.2%, versus the expected 1.3%. Of course, the servicer would suffer losses before the AAA securities were affected. But at an annual loss rate of 3.2%, the IRR of the AAA securities is only 5.95%. At a loss rate of 3.3% it is only 5.89%, and so forth.

**D)** If the prepayment rate were 30% instead of 11%, the rate of return to the residual interest would fall somewhat, from 12.82% to 11.75%. Given the facts of this case, the residual interest does have some level of prepayment sensitivity. The rate of return falls as prepayments rise. Regarding the AAA securities, all cash flows would be accelerated. Although these securities would still earn 6.0%, they would be completely paid off in only 4 years, as opposed to 6 years. Debt securities are always subject to various risks. Since these AAA debt securities can be prepaid by the borrower, they are subject to prepayment risk. When interest rates fall, the securities become more valuable to their holders, but faster prepayment causes them to be retired more quickly. Prepayment risk is equivalent to the loan being “callable” by the borrower.

### **Requirement 3:**

The residual interest is a complex financial instrument that is difficult to value. The expected cash flows themselves (from requirement 2 above) are subjective, and so is the discount rate used to bring those cash flows back to the present. A smaller discount rate indicates less expected risk, and results in a higher valuation of the residual interest. Some banks and other companies have recently been criticized for selecting too low of a discount rate, and in some cases they have been found guilty of improper accounting. A 12% discount rate applied to the expected cash flows of the residual interest results in a present value of \$8,273 (in thousands) and an accounting gain:

<b>Cash</b>	<b>\$118,000</b>	
<b>Debt Securities</b>	<b>\$8,273</b>	
<b>Loans Receivable (net)</b>		<b>\$125,000</b>
<b>Gain</b>		<b>\$1,273</b>

Whereas, if a 14% discount rate is used, a fair value of \$7,633 results. A smaller gain is recognized:

<b>Cash</b>	<b>\$118,000</b>	
<b>Debt Securities</b>	<b>\$7,633</b>	
<b>Loans Receivable (net)</b>		<b>\$125,000</b>
<b>Gain</b>		<b>\$633</b>

As discussed elsewhere, if consolidation is required, the valuation of the residual interest is ultimately not required. There could be an additional gain or loss on the sale if the fair value of the receivables did not equal the book value of the receivables. For example, assume the receivables with book value of \$125,000 had a \$132,000 fair market value due to a decline in market interest rates. This \$7,000 gain would appear in the sale journal entry.

### **Requirement 4:**

**A)** In a sale of accounts receivable or notes receivable, the cash received is an operating cash flow, no different than if the receivables had been collected. But in a secured borrowing, the cash received is a financing cash flow (and collections on the receivables are still operating cash flows). While a securitization is a more complex process, it does not change the rules for cash flow classification. If the transfer is deemed a sale, then the cash received is an operating cash flow.

**B)** Referring to Figure 1, if a securitization is accounted for as a sale, the loans will be removed from the balance sheet, and no debt will be added to the balance sheet. But even if sale treatment is achieved, the company may be

required to consolidate the SPE. SPEs usually fit the accounting definition of a variable interest entity (VIE). A VIE is an entity whose equity holders lack either decision making ability or a sufficient amount of equity to absorb the expected losses of the VIE. ASC Topic 810-10 indicates that a company must consolidate a VIE if the company is the VIE's "primary beneficiary".

ASC 810-10 explains that the primary beneficiary has:

- a. the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, and
- b. the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE.

The first condition is often met by being the servicer of the loans. The second can be met by retaining a financial stake in the receivables, namely through owing the residual interest. Thus, if ProAgri remains the servicing company, both conditions will likely be met, and ProAgri must consolidate. The sale, including any gain or loss on the sale, will not exist with respect to the consolidated financial statements.

C) Deere accounts for its securitizations as a secured borrowing. Since there is no sale, the certificates are not specifically shown on the balance sheet.

From:

*NOTES TO CONSOLIDATED FINANCIAL STATEMENTS*

## **SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (note 2)**

### **Securitization of Receivables**

Certain financing receivables are periodically transferred to special purpose entities (SPEs) in securitization transactions (see Note 13). These securitizations qualify as collateral for secured borrowings and no gains or losses are recognized at the time of securitization. The receivables remain on the balance sheet and are classified as "Restricted financing receivables - net." The company recognizes finance income over the lives of these receivables using the interest method.

### **SECURITIZATION OF FINANCING RECEIVABLES (note 13)**

The company, as a part of its overall funding strategy, periodically transfers certain financing receivables (retail notes) into variable interest entities (VIEs) that are special purpose entities (SPEs) as part of its asset-backed securities programs (securitizations). The structure of these transactions is such that the transfer of the retail notes did not meet the criteria of sales of receivables, and is, therefore, accounted for as a secured borrowing. SPEs utilized in securitizations of retail notes differ from other entities included in the company's consolidated statements because the assets they hold are legally isolated. For bankruptcy analysis purposes, the company has sold the receivables to the SPEs in a true sale and the SPEs are separate legal entities. Use of the assets held by the SPEs is restricted by terms of the documents governing the securitization transaction.

#### ***Requirement 5:***

A) There are different maturity notes (debt securities) (Classes A-1 through A-4) for different investor preferences. The Class A-1 notes are in the short-term (commercial paper) category of investments. AAA ratings should carry minimal credit risk. All four classes carry the highest possible credit rating. (Investment grade is a larger set of ratings, all the way down to Baa or BBB, using ratings agencies' classifications). Another difference (page S8) is the use of a reserve account. A reserve account of \$9.3 million is created, which provides a backup means of payment during a difficult period. The reserve account may or may not actually need to be used.

**B)** Page S19. The average size of a receivable is \$42,529, with an original term of 50.63 months and a remaining term of 41.06 months. There is a 3.724% weighted APR, a rate significantly higher than the 2.1% rate on the class A-4 notes.

Pages S32-S33. At a CPR of 16%, the weighted average life of the A-1 notes would be 0.37 years, and the weighted average life of the A-4 notes would be 3.21 years.

**C)** Some delinquencies might be collected, but even among those that are not, the collateral (machinery/equipment) will likely be repossessed, resulting in a smaller actual loss.

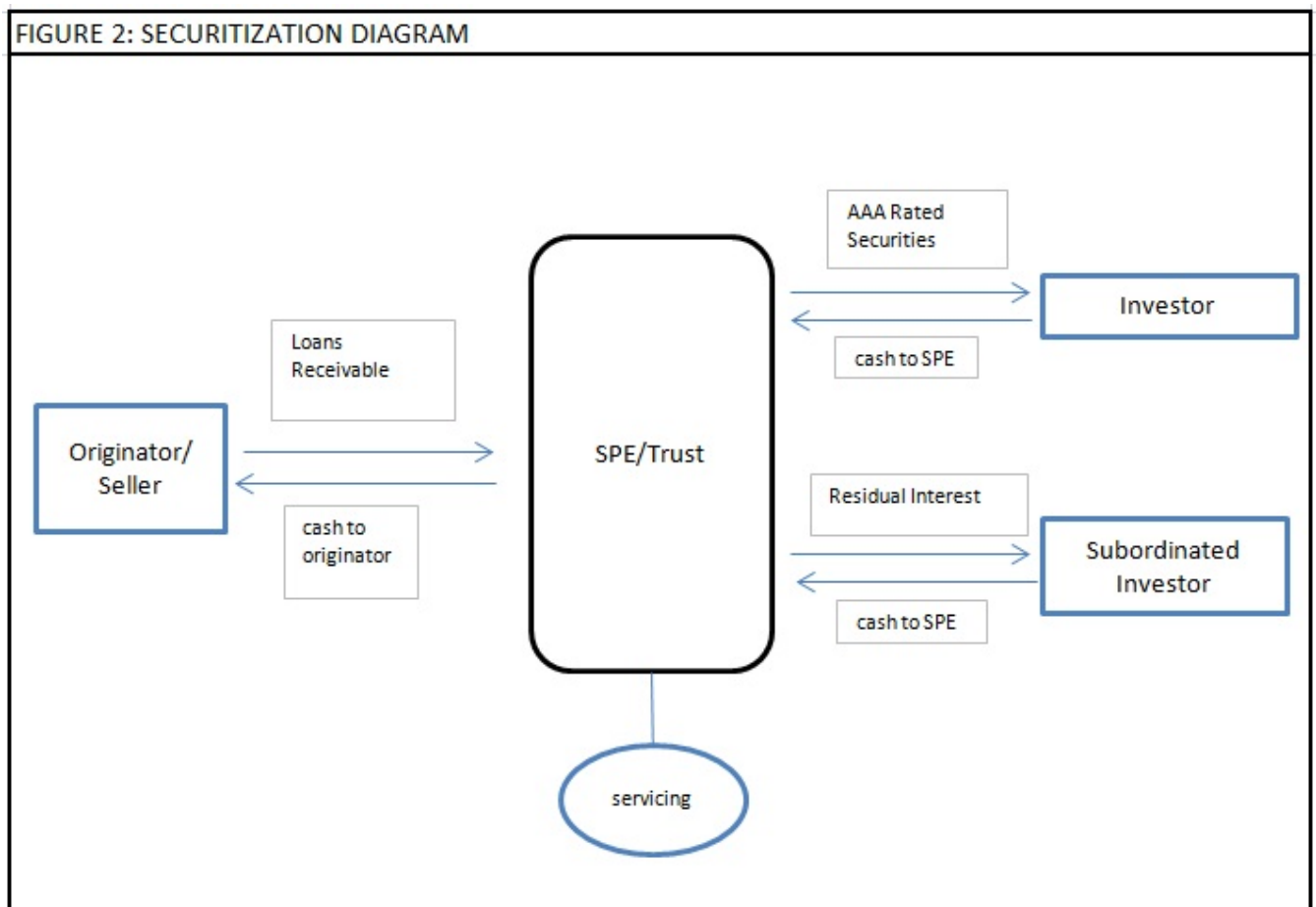
**D)** The trust is inactive for the most part; note that its directions are set up ahead of time. However, the 2% repurchase option of specific assets is an indicator of active management. According to GAAP, this type of call option clearly negates sale treatment, even at the low level of 2%.

“Clean-up” calls do not negate sale treatment (from ASC 860-10-40-5(c)(2) and ASC 860-10-55). This mechanism involves terminating the trust when its activities are nearly finished. In practice, ten percent or lower of the original balance has been accepted as the definition of a clean-up, although there is no authoritative bright line

**Figure 1: Transfers of Loans Receivable**

<b>Type</b>	<b>Entry</b>	<b>Balance Sheet Impact</b>
Sale	Debit: Cash Credit: Loans Receivable Possible gain or loss	Minimal
Secured Borrowing	Debit: Cash Credit: Debt Securities Payable	Assets and Liabilities both increase
Securitization (Sale)	Debit: Cash Credit: Loans Receivable Possible gain or loss	Minimal, but VIE (SPE) might have to be consolidated, resulting in Assets and Liabilities both increasing
Securitization (Secured borrowing)	Debit: Cash Credit: Debt Securities Payable	Assets and Liabilities both increase

Figure 2: Securitization Diagram



**Figure 3: ProAgri Company Receivables (\$ in millions)**

<b>FICO</b>	<b>Current</b>	<b>0-30 days past due</b>	<b>31-60 days past due</b>	<b>61-90 days past due</b>	<b>90+ days past due</b>	<b>TOTAL</b>
<b>825</b>	22					22
<b>775</b>	36	1				37
<b>725</b>	22	2				24
<b>675</b>	15	1		1		17
<b>625</b>	9	2				11
<b>575</b>	5	1	2			8
<b>525</b>	4	2				6
<b>475</b>	5	1	1			7
<b>425</b>	3	2		1	1	7
<b>TOTAL</b>						<b>139</b>

Figure 4: Spreadsheet Template

Requirement 2A								
		interest rate			0.090			
		credit loss percentage			0.013			
		prepayment rate			0.110			
Expected cash inflows from receivables								
payments	beg	credit	net	interest	sched	prepay	end	TOTcash
remain	prin	loss	prin		prin		prin	
7	126000							
6								
5								
4								
3								
2								
1								
Senior AAA securities (SNR)				interest rate:	0.06			
	beg	prin red	interest	end	cash SNR			
7	118000							
6								
5								
4								
3								
2								
1								
						IRR:		
Residual Interest (RI)				servicing fee:	0.0075			
	TOTcash	servicing	cash SNR	cash RI				
7								
6								
5								
4								
3								
2								
1						IRR:		

**Figure 5: ProAgri Company Loans Receivable to be Securitized (\$ in thousands)**

Loans Receivable	\$126,000
Add: Deferred Costs	\$600
Less: Allowance for Loan Losses	(\$1,600)
Loans Receivable (net)	\$125,000



**Figure 6: Student Assessment Data**

Graduate Financial Accounting (Accounting Theory)	
Semesters: 2	
Total Students: 98	
My understanding of the securitization process increased.	4.21
My ability to create and use amortization tables increased.	3.93
Studying a real-world securitization was beneficial.	4.33
My understanding of the sale vs. secured borrowing distinction increased.	3.96
My understanding of loan defaults and prepayments increased.	3.84
My understanding of financial (debt) instruments increased.	4.02
The case was useful overall.	4.18
I would recommend that this case be used in the future.	4.16
Scale (5: strongly agree to 1: strongly disagree)	

Figure 7: Solution to Requirement 2A

Requirement 2A								
		interest rate			0.090			
		credit loss percentage			0.013			
		prepayment rate			0.110			
Expected cash inflows from receivables								
payments	beg	credit	net	interest	sched	prepay	end	TOTcash
remain	prin	loss	prin		prin		prin	
							126000	
7	126000	1638	124362	11193	17766	13680	92916	42638
6	92916	1208	91708	8254	15285	10088	66336	33626
5	66336	862	65473	5893	13095	7202	45177	26189
4	45177	587	44589	4013	11147	4905	28537	20065
3	28537	371	28166	2535	9389	3098	15679	15022
2	15679	204	15475	1393	7738	1702	6035	10833
1	6035	78	5957	536	5957	0	0	6493
Senior AAA securities				interest rate:		0.06		
	beg	prin red	interest	end	cash SNR			
					-118000			
7	118000	33084	7080	84916	40164			
6	84916	26581	5095	58336	31676			
5	58336	21159	3500	37177	24659			
4	37177	16639	2231	20537	18870			
3	20537	12858	1232	7679	14090			
2	7679	7679	461	0	8140			
1	0	0	0	0	0			
						IRR:	6.00%	
Residual Interest				servicing fee:		0.0075		
	TOTcash	servicing	cash SNR	cash RI				
				-8000				
7	42638	945	40164	1530				
6	33626	697	31676	1254				
5	26189	498	24659	1033				
4	20065	339	18870	856				
3	15022	214	14090	718				
2	10833	118	8140	2575				
1	6493	45	0	6448		IRR:	12.82%	